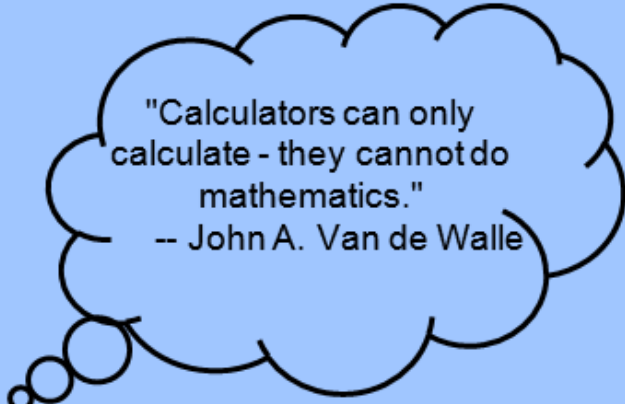
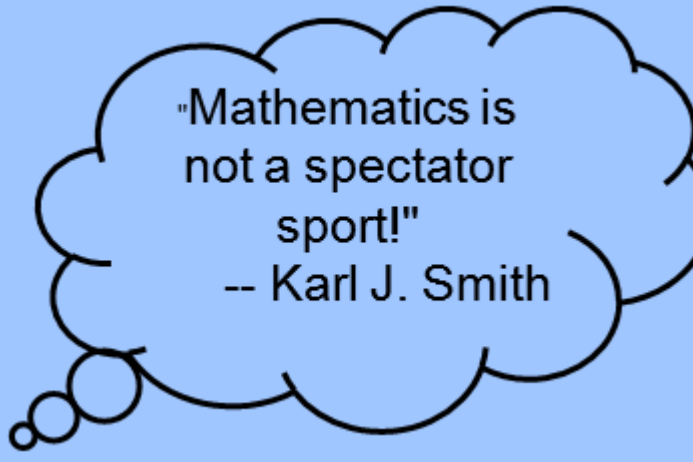


"All mathematicians share
... a sense of amazement
over the infinite depth and
the mysterious beauty and
usefulness of
mathematics."
-- Martin Gardner

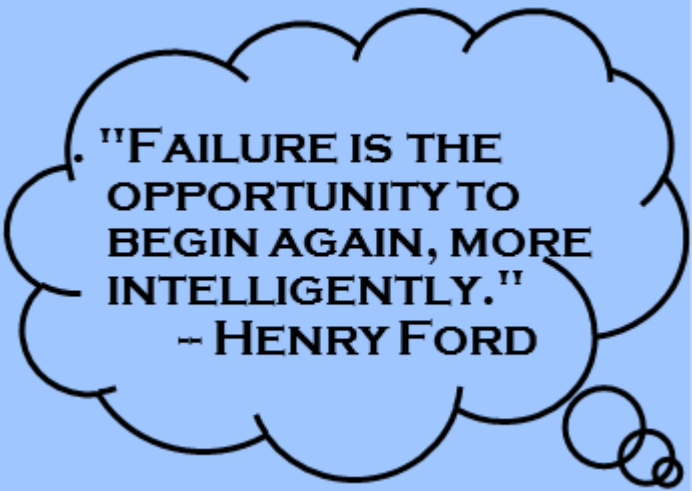


"Calculators can only
calculate - they cannot do
mathematics."
-- John A. Van de Walle

Maths Parent Workshop



"Mathematics is
not a spectator
sport!"
-- Karl J. Smith



**"FAILURE IS THE
OPPORTUNITY TO
BEGIN AGAIN, MORE
INTELLIGENTLY."
-- HENRY FORD**

Aims of this session

- Understand the changes to the new maths curriculum
- To use the written calculation methods we use at Urchfont and why they are important
- To enable you to be confident at supporting your child in maths.

The New Curriculum - what are the key changes?

It goes further than the previous curriculum. There's quite a lot of new content. This includes fractions being taught from year 1, by the age of 9 children will be expected to know all times tables to 12×12 and long division at year 6.

Practice is key! The aims state that it is imperative to keep key maths fundamentals, such as times tables and number facts, "on the boil" through varied and repeated practice in order that children can solve progressively complex problems.

There is a renewed emphasis on problem solving. There is a particular emphasis on multi-step problems and more emphasis on money and time.

What's New in The Year 5 Curriculum?

Understand & use decimals to 3dp

- Solve problems using up to 3dp, and fractions
- Write percentages as fractions; fractions as decimals
- Use vocabulary of primes, prime factors and composite numbers.
- Know prime numbers to 20
- Understand square and cube numbers
- Use standard multiplication and division methods for up to 4 digits
- Add and subtract fractions with the same denominator
- Multiply proper fractions and mixed numbers by whole numbers
- Deduce facts based on shape knowledge
- Distinguish regular and irregular polygons
- Calculate the mean average

Addition Strategies we Teach

$$\begin{array}{r} 47 \\ + 76 \\ \hline 123 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 258 \\ + 87 \\ \hline 345 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 366 \\ + 458 \\ \hline 824 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 45.24 \\ + 26.59 \\ \hline 71.83 \\ \hline 1 \quad 1 \end{array}$$

Subtraction Strategies we teach

874 – 523 becomes

$$\begin{array}{r} 874 \\ - 523 \\ \hline 351 \\ \hline \end{array}$$

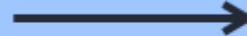
932 – 457 becomes

$$\begin{array}{r} 8 \quad 12 \quad 1 \\ \cancel{9} \quad \cancel{3} \quad 2 \\ - 4 \quad 5 \quad 7 \\ \hline 4 \quad 7 \quad 5 \\ \hline \end{array}$$

Multiplication Strategies we teach

$$38 \times 7 = (30 \times 7) + (8 \times 7) = 210 + 56 = 266$$

| X | 7 |
|----|-----|
| 30 | 210 |
| 8 | 56 |
| | 266 |



$$\begin{array}{r} 38 \\ \times 7 \\ \hline 266 \\ 5 \end{array}$$

Moving on to

56×27

| \times | 20 | 7 | |
|----------|------|-----|------|
| 50 | 1000 | 350 | 1350 |
| 6 | 120 | 42 | 162 |
| | | | 1512 |
| | | | 1 |



124×26 becomes

| | | | | |
|---|---|---|---|---|
| | 1 | 2 | | |
| | 1 | 2 | 4 | |
| × | | 2 | 6 | |
| | 7 | 4 | 4 | |
| | 2 | 4 | 8 | 0 |
| | 3 | 2 | 2 | 4 |
| | 1 | 1 | | |

Answer: 3224

Division Strategies we teach

$432 \div 5$ becomes

$$\begin{array}{r} 86 \text{ r } 2 \\ 5 \overline{) 432} \end{array}$$

Answer: 86 remainder 2



$432 \div 5$ becomes

$$\begin{array}{r} 86 \text{ r } 2 \\ 5 \overline{) 432} \end{array}$$

Answer = $86 \frac{2}{5}$

$432 \div 5$ becomes

$$\begin{array}{r} 86.4 \\ 5 \overline{) 432.0} \end{array}$$

Answer = 86.4



Moving on to

432 ÷ 15 becomes

$$\begin{array}{r} 28 \\ 15 \overline{) 432} \\ \underline{300} \\ 132 \\ \underline{120} \\ 12 \end{array} \quad \begin{array}{l} 15 \times 20 \\ 15 \times 8 \end{array}$$

Answer = 28 r 12

Or

$$28 \text{ r } \frac{12}{15}$$

Fractions

Compare and order fractions

Arrange $\frac{3}{4}$, $\frac{3}{2}$, $\frac{4}{3}$, $\frac{5}{6}$ in ascending order.

$$\frac{3}{4} = \frac{9}{12} \quad \frac{3}{2} = \frac{18}{12} \quad \frac{4}{3} = \frac{16}{12} \quad \frac{5}{6} = \frac{10}{12}$$

The correct order is $\frac{3}{4}$, $\frac{5}{6}$, $\frac{4}{3}$, $\frac{3}{2}$.

Add and subtract fractions

$$\frac{3}{5} + \frac{7}{10} = \frac{6+7}{10} = \frac{13}{10} = 1\frac{3}{10}$$

$$2\frac{3}{7} + 1\frac{5}{7} = 3\frac{8}{7} = 4\frac{1}{7}$$

$$\frac{11}{12} - \frac{3}{4} = \frac{11-9}{12} = \frac{2}{12} = \frac{1}{6}$$

$$5\frac{3}{4} - 1\frac{1}{8} = 4\frac{6-1}{8} = 4\frac{5}{8}$$

Multiply fractions

$$\frac{2}{3} \times 4 = \frac{2}{3} \times \frac{4}{1} = \frac{2 \times 4}{3 \times 1} = \frac{8}{3} = 2\frac{2}{3}$$